TAB C

BEFORE THE FEDERAL COMMUNICATIONS COMMISSION WASHINGTON, D.C. 20554

In the Matter of		
)	
Qwest Communications)	
International Inc.)	WC Docket No. 02-189
)	
Consolidated Application for Authority)	
to Provide In-Region, InterLATA Services in)	
Montana, Utah, Washington, and Wyoming)	
)	

DECLARATION OF MICHAEL R. LIEBERMAN AND BRIAN F. PITKIN ON BEHALF OF AT&T CORP.

I. BACKGROUND AND SUMMARY

- 1. My name is Michael R. Lieberman. I am a District Manager in AT&T's Law and Government Affairs organization. In this position I am responsible for providing financial and industry analytical support relating to the costing and pricing of local telecommunications services. I was AT&T's primary participant in the development of the HAI/Hatfield Model of forward looking economic costs for local exchange networks and services, and I have been responsible for evaluating other costing models and methodologies such as the BCPM and the FCC's Synthesis Model. I have a Bachelor's degree in mathematics and a Master's degree in statistics from the State University of New York at Stony Brook. Prior to joining AT&T as a statistical consultant in 1978, I was a bio-statistical consultant with Carter-Wallace of Cranbury, New Jersey.
- 2. My name is Brian F. Pitkin. I am a Director in the Financial Consulting Division of FTI Consulting, Inc. During the past six years, I have had extensive experience with the cost models and underlying databases that have been submitted in proceedings arising out of the

Telecommunications Act of 1996 ("1996 Act"). I have testified on the inputs and methodologies used in a variety of cost models and cost studies used in state and federal proceedings for estimating costs of (1) unbundled network elements ("UNEs") for interconnection, (2) basic local service for universal service fund ("USF") requirements, and (3) access services. I received a Bachelor of Science degree in Commerce, with concentrations in both Finance and Management Information Systems, from the McIntire School of Commerce at the University of Virginia in 1993.

II. PURPOSE AND SUMMARY OF TESTIMONY

- 3. The purpose of our testimony is to demonstrate that Qwest's UNE rates in the states of Montana, Utah, Washington, and Wyoming are vastly overstated, and that Qwest's attempt to justify those rates using the Commission's benchmarking approach is flawed and must be rejected. In each of these four states, the state commissions did not develop rates based on TELRIC-principles.¹ Qwest's answer to this obvious deficiency is to lower the UNE rates in these four states at the very last minute so that (according to Qwest), the new lower rates would satisfy the Commission's benchmarking test, with the presumption that Colorado's (Qwest's anchor state) rates are TELRIC-compliant. Qwest's argument fails on multiple levels.
- 4. First, even assuming (contrary to fact)² that Qwest's Colorado UNE rates are TELRIC-compliant, Qwest is wrong when it claims that its UNE rates in Montana, Utah, Washington, and Wyoming satisfy the Commission's benchmarking analysis using Colorado's rates as a benchmark. As we demonstrate below, Qwest's benchmarking analysis is flawed in

¹ See Declarations of Robert Mercer, Dean Fassett and Richard Chandler.

² As demonstrated by AT&T's other pricing experts, Colorado's UNE rates are substantially inflated by myriad TELRIC-errors. *See* Mercer/Fassett Decl. & Mercer/Chandler Decl.

two critical respects. First, Qwest's analysis uses the Commission's standardized minutes-of-use instead of state-specific and company-specific minutes-of-use. That approach is inappropriate and substantially distorts the results of the analysis. Second, Qwest fails to account for the fact that the Synthesis Cost Model does a relatively poor job of benchmarking between a mix of very rural states and less rural states. Correcting for these errors in Qwest's benchmarking analysis confirms that Washington, Utah, Montana and Wyoming do not, in fact, pass the Commission's benchmarking test.

5. Second, we demonstrate that Qwest's inflated UNE rates preclude competitive entry in at least three of the states in Qwest's application. As we show below, the statewide margins available to new entrants – using a margin-maximizing combination of UNE and resale entry – are not remotely sufficient to cover an efficient carrier's internal costs of entry.

III. QWEST'S BENCHMARKING ANALYSIS IS FUNDAMENTLLY FLAWED.

6. Loop Benchmarking. The Commissions should reject Qwest's loop benchmarking analysis for Montana and Wyoming out of hand, because the benchmarking analysis masks the underlying TELRIC errors. The purpose of the benchmarking analysis is to evaluate the potential impact of TELRIC violations, and to make a determination as to whether those violations inflate rates above the range that a reasonable application of TELRIC principles would have produced. Because the Commission's benchmarking analysis aggregates UNE rates for all UNE zones, the benchmarking analysis cannot be used to assess the impact of clear TELRIC errors in the deaveraging methodology. The Commission's benchmarking analysis compares state-wide average UNE rates and, therefore, does not reflect clear TELRIC-errors in the deaveraging process.

- As described in the declaration of Dean Fassett and Robert Mercer, there are, in fact, serious clear TELRIC errors in the methodology used to develop UNE rate zones in Montana and Wyoming. The UNE rate zones in Montana and Wyoming are basically concentric circles formed around wire-centers, where the innermost circle is the lower-cost UNE rate zone, and the outmost circle is the higher-cost UNE rate zone. That means that a CLEC serving a customer near a wire center located in the middle of a city must pay the same UNE rate as a customer located near a wire center located on the top of an isolated mountain. The customer costs of a wire center vary significantly with physical location and demographic characteristics. Thus, Qwest's Montana and Wyoming UNE loop rates are not cost-based, and do not comply with Checklist Item 2. And because the Qwest's proposed benchmarking analysis would not account for that problem and, in fact hides that problem, the Commission cannot rely on a benchmarking "short-cut" to assess whether the UNE rates in Montana and Wyoming are TELRIC-compliant.
- 8. Non-Loop and Switching Benchmarking. Qwest recognizes that its UNE rates in Washington and Wyoming are based upon stale data, and that they are inflated by several TELRIC errors. For this reason, Qwest has implemented a series of arbitrary rate reductions in each of those states. Qwest claims that the resulting rates in each state are sufficient to warrant Section 271 authority because they pass the Commission's benchmarking test relative to Colorado. Qwest would have the Commission believe that TELRIC principles are irrelevant if the rates in Washington, and Wyoming are comparable (allegedly) to the rates in Colorado, on a fully cost-adjusted basis. This claim is specious.
- 9. As a preliminary matter, Qwest's assertions presume that the rates established in Colorado, its proposed benchmark state, are TELRIC-compliant. However, AT&T declarations

being filed by Messrs. Mercer, Fassett, Chandler and Weiss (included with AT&T's Comments as Attachment 1) demonstrate that the Colorado rates are inflated by significant TELRIC errors and as a result, are significantly higher than properly-calculated TELRIC-based rates. Thus, even if Qwest had properly performed its "cost-adjusted" rate calculations (which it has not), the resulting rates in Montana, Utah, Washington, and Wyoming would not be consistent with TELRIC.

10. Even if TELRIC principles had been followed in Colorado, and its rates had fallen within the reasonable range that the Commission's rules require, Qwest's benchmarking analysis – which is fundamentally flawed – leaves the Commission no choice but to reject Qwest's claims. Most notably, Qwest's non-loop benchmark analysis is flawed because it is based on the Commission's standardized minutes-of-use." Qwest defends its use of non-state-specific minutes by pointing out that benchmarking comparisons require that the state-specific minutes data (available from ARMIS) be divided between interoffice and intraoffice minutes, and notes that Qwest has not made data showing that state-specific allocation available to CLECs or to the Commission. Because AT&T and other CLECs have not been provided access to Qwest's state-specific interoffice vs. intraoffice minutes-of-use allocations, Qwest contends, a benchmarking analysis that necessarily combines state-specific total minutes with estimated state specific intraoffice/interoffice allocations is imperfect. According to Qwest, the Commission has no choice in these circumstances but to rely upon Qwest's national average-based comparisons. Qwest's argument is nonsensical.

³ Qwest's benchmark comparisons use the Commission's standardized minute assumptions: 1200 originating and 900 terminating local minutes per line per month; and 370 originating and terminating intraLATA toll, intrastate interLATA and interstate interLATA minutes per line per month.

⁴ See Qwest July 22 Ex Parte Letter at 3.

- 11. The premise of Qwest's claim that allocating state-specific minutes using reasonable, non-state-specific allocation assumptions could change the conclusions drawn from the benchmarking analyses is wrong. In reality, changing the allocations that are applied to the state-specific minutes does not change the conclusions of the benchmarking analyses at all. Whether zero percent or 100 percent of state-specific minutes are allocated to intraoffice minutes, the conclusions drawn from the benchmarking analyses based on state-specific minutes are the same all four states fail. *See* Exhibit B (showing summary of benchmarking results using zero percent and 100 percent allocations, and that those allocations do not changes the fundamental conclusion of our state-specific margin analyses).
- 12. There is a further reason to reject Qwest's claims. It is *Qwest's* burden to establish that its rates in the other states compare favorably to its benchmark state on a cost-adjusted basis. Qwest cannot be permitted, on the one hand, to withhold from the Commission and the parties the data in its possession that would permit a state-specific allocation to be made while, on the other hand, arguing that parties such as AT&T be penalised for not using such data. In the face of Qwest's refusal to provide the actual state-specific allocation data, reasoned decision making and the Commission's own rulings require that the next best alternative be used state-specific minutes-of-use information with reasonable allocations between intraoffice traffic and interoffice traffic.
- 13. As the Commission has explained, "UNE rates are set by state commissions based on state-specific costs divided by total demand. The UNE rates therefore necessarily reflect state-specific minutes-of-use and traffic assumptions. Use of state-specific minutes-of-use perline and traffic assumptions to develop per-line per-month UNE-platform prices for a benchmark state and an applicant states is therefore consistent with the manner in which states establish the

UNE-Platform rates." These Commission findings unambiguously confirm that the use of state-specific minutes-of-use produces far more accurate benchmarking results than does the use of national average minutes. The Commission's benchmarking analysis is supposed to be an objective short cut test to assess whether an applicant state's rates fall within a reasonable range of TELRIC-compliance. To allow applicants to pick-and-choose the minutes-of-use on which to pin their applications – which can greatly affect that analysis – would allow applicants to game the system, and would make a mockery of the Section 271 applications process.

- 14. The fact that Qwest has not made its state-specific interoffice/intraoffice allocations available for the purposes of conducting fully state-specific benchmarking analyses certainly does not mean that the better approach is to abandon all state-specific minutes-of-use data, and instead to base the benchmarking approach on national minutes-of-use assumptions and national interoffice/intraoffice minutes allocations that are necessarily less state-specific. Two wrongs do not make a right to the extent that non-state-specific assumptions must be made under either approach, common sense and basic mathematics dictate that a benchmarking analysis that starts with state-specific total minutes-of-use (as we are advocating) would more accurately reflect relative costs than an analysis that relies on neither state-specific total minutes, nor state-specific interoffice/intraoffice allocations.⁶
- 15. In the past, Qwest has attempted to defend use of national average minutes in its benchmarking analyses on the grounds that in some cases, use of national average minutes data instead of state-specific minutes produces greater state-to-state cost-adjusted rate variations than

⁵ See New Jersey 271 Order ¶ 53.

⁶ See id. Qwest also claims that the fact that AT&T's and WorldCom's benchmarking analysis fails to reflect state-specific allocations of minutes between originating and terminating calls, and between calls to an access tandem and calls direct to a POP. As explained in that attached

is produced by the state-specific data, and in other cases the national average minutes data produce lower state-to-state cost-adjusted rate differences than produced by the state-specific data. Qwest also notes that the relative difference in the national average and state-specific benchmarking analyses may vary from year to year (because the total number of minutes varies from year to year). But that is precisely why the more accurate state-specific data must be used – it would be entirely arbitrary to endorse Qwest's position that an RBOC can choose whatever data are most beneficial with respect to the particular states and at the particular times that the RBOC chooses to file applications. And Qwest has clearly employed such gamesmanship here. Using state-specific minutes-of-use, and reasonable estimates for the allocation of those minutes shows that Qwest's Utah and Washington non-loop rates fail the Commission's benchmarking analysis. On the other hand, Qwest's flawed non-loop benchmarking analysis – which is based on national minutes – produces a distinctly more favorable result for Qwest.

16. Qwest's claim that the use of national average minutes to conduct its benchmarking analysis does not benefit Qwest also is irrelevant (in addition to being patently false). The purpose of the Commission's benchmarking analysis is to determine whether rates in a particular state are similar to the rates in the benchmark state, on a cost adjusted basis. The proper methodology for conducting that analysis does not depend on whether one methodology systematically produces higher or lower results than a competing methodology. Rather, the proper methodology is the one that produces the most accurate results. As recognized by this Commission in the *New Jersey 271 Order* (¶ 53), the most accurate benchmarking analysis is

declaration of Michael Lieberman, those allocations have little, if any, impact on the results of the benchmark analysis. See Lieberman Owest I Reply Decl., n.1.

⁷ See Qwest July 22 Ex Parte Letter at 3-5.

⁸ See id.

one that employs state-specific minutes and, if available, state-specific assumptions relating to the allocation of those minutes.⁹

- 17. Qwest's efforts at benchmarking fail to take into account the fact that the Synthesis Cost Model is a not a particularly good indicator of relative differences in interoffice costs between very rural states and more urban states. As noted above, the Commission has in the past used the Synthesis Cost Model to make cost-adjusted state-to-state comparisons of non-loop rates which include the costs of the switch port, switch usage, switch features, signalling, transport, and tandem switching. However, that sort of comparison is less reliable when comparing rates in very rural states (e.g., Montana and Wyoming) to rates in more densely populated states (e.g., Colorado) because the Synthesis Cost Model substantially overstates non-loop costs (particularly the interoffice portion of non-loop costs) in rural states relative to less rural states, thereby substantially overstating the level of non-loop rate differences that should be justified by more accurate cost calculations.
- 18. There is no question that the Synthesis Cost Model substantially overstates non-loop costs in very rural states. For example, the Synthesis Cost Model places OC-48 transport rings in virtually all cases. While this design is appropriate for geographic areas with high volumes of interoffice transport traffic (such as Colorado), this approach overbuilds the transport network that would be most efficient in more rural, low-traffic volume areas (such as Montana and Wyoming).
- 19. This overstatement is compounded by the default inputs used in the Synthesis Cost Model, which are the same for both high-density (Colorado) and low-density (Montana and

⁹ The benchmarking analysis should reflect relative cost-adjusted UNE charges encountered by the average subscriber in one state versus the average subscriber in the comparison state. This is best accomplished by reflecting the average minutes for the respective states.

Wyoming) areas. For instance, the model assumes the same percent of inter-office traffic for Colorado, Montana, and Wyoming. However, one would expect the fraction of inter-office traffic – and hence the percent of minutes requiring inter-office facilities – in Montana and Wyoming to be far less than in Colorado, because most calls would take place between members of a single community, served by a single switch. ¹¹ The Synthesis Model does not reflect these differences and will therefore construct inter-office facilities (*i.e.*, transport and tandem switching) in Montana and Wyoming that are designed to carry a higher proportion of inter-office calls – thereby overbuilding the network and inflating the costs relative to Colorado.

- 20. Because the Commission's Synthesis Cost Model is a poor indicator of non-loop cost differences between states like Montana and Wyoming (very rural states) relative to Colorado (a much less rural state), Qwest's assertion that this Commission should rubber stamp its Montana and Wyoming non-loop rates based on a non-loop benchmarking analysis between those states and Colorado would do a disservice to consumers in those two rural states. Given that Qwest's average customer density in Colorado (approximately 60 line per square mile) is three times higher than in Montana (approximately 20 lines per square mile) and about seven times higher than in Wyoming (approximately 8 lines per square mile), the Synthesis Model interoffice costs cannot be used reliably to gauge Qwest's relative forward-looking costs between these states.
- 21. For the foregoing reasons, to the extent this Commission concludes that a switching-related benchmark analysis for Montana and Wyoming relative to Colorado is appropriate, that analysis should at a minimum exclude the costs of transport facilities and tandem switches (*i.e.*, inter-office facilities) from the benchmarking analysis, and focus on the

¹⁰ The Synthesis Cost Model does allow OC-3 rings for host-remote configurations.

primary switching rate elements (i.e., the switch port, switch usage, switch features and signaling).

22. Correcting the flaws in Qwest's analysis demonstrates that the rates in the states in Qwest's Application do not pass the benchmark test. We conducted an analysis of Qwest's Montana, Utah, Washington, and Wyoming UNE rates that corrects for all of these errors in Qwest's analysis. In particular, we have compared Qwest's Utah and Washington non-loop rates to those in Colorado using state-specific minutes-of-use assumptions, and accounting for the fact that Qwest no longer owns certain exchanges (See Exhibit A) in Utah. The results of this analysis are summarized in Table 1 (below).

Table I

Cost Adjusted Non-Loop Rates

	UNE Non-Loop	% Diff in UNE Non-Loop	FCC SynMod	% Diff in Cost Adjusted UNE
State	Rate, per line per month	Rate: Other states vs CO	Non-Loop cost per line.	Non-Loop Rate: Other states vs CO
UT - QVR WA - QVR	\$ 5.35 \$ 4.72	5% -8%	\$ 3.75 \$ 3.48	14% 8%

- 23. This analysis confirms that Qwest's Utah and Washington non-loop rates cannot be justified by a comparison on a cost-adjusted basis to Qwest's Colorado non-loop rates. Indeed, Qwest's non-loop rates in Utah and Washington exceed those in Colorado, on a fully cost adjusted basis, by 14% and 8%, respectively.
- 24. We have also compared Qwest's switching rates in Montana, and Wyoming to those in Colorado by excluding the costs associated with transport and tandem switching (to

¹¹ Qwest has not provided current data identifying the amount of inter-office calls for each state.

account for the fact that the Synthesis Cost Model overstates those costs in rural areas). The results of this analysis are summarized in Table 2 (below). Also, *See* Exhibit A.

Table II
Cost Adjusted Switching Rates

State	UNE Switching Rate, per line per month	% Diff in UNE Switching Rate: Other states vs CO	FCC SynMod Switching cost per line.	% Diff in Cost Adjusted UNE Switching Rate: Other states vs CO
MT - QVR	\$ 7.16	62%	\$ 3.85	52%
	\$ 4.71	7%	\$ 3.31	16%
UT - QVR	\$ 4.71	7%	\$ 3.31	16%
WY - SGAT	\$ 5.57	26%	\$ 3.44	32%

25. This analysis confirms that Qwest's Montana, Utah and Wyoming switching rates cannot be justified by a comparison to Qwest's Colorado switching rates. Indeed, Qwest's switching rates in Montana, Utah and Wyoming exceed those in Colorado, on a fully cost adjusted basis, by 52%, 16%, and 32%, respectively.

26. Loop-Related Non-Recurring Rates. The non-recurring costs associated with UNE-P for Montana are significantly higher than Colorado, primarily due to the OSS related charges. Qwest's Montana charge for OSS developments and enhancements is \$14.44 and the charge for OSS maintenance is \$1.41. These charges must be paid for every order and result in a much larger impact than the standard UNE-P non-recurring costs for conversions and new connections. Converting these non-recurring costs into amortized monthly costs (assuming the costs will be recovered over a 30-month period) results in a monthly recurring cost of \$0.74 in Montana compared to a much lower \$0.16 in Colorado. Qwest has provided no evidence to support such

large differences in rates that presumably recover the costs of the same underlying activities.

Table II (below) compares these charges across Qwest states.

Table III
Non-Recurring Rates

State	UNE-P Conversion	c	UNE-P New Connection	OSS Developments and Enhancements	OSS Ongoing Maintenance	M	mortized Ionthly Cost	% MT Higher Than Other states
co	\$ 0.6	3 \$	41.57	No Charge	No Charge	\$	0.16	364%
MT	\$ 0.6	9 \$	56:56	\$ 14.44	\$ 1.41	\$	0.74	N/A
UT	\$ 0.2	3 \$	28.98	Under Development	Under Development	\$	0.10	606%
WA	\$ 0.6	3 \$	34.07	\$ 3.27	\$ 3.76	\$	0.37	100%
WY	\$ 0.6	3 \$	56.62	Under Development	Under Development	\$	0.21	252%

IV. STATEWIDE UNE-P ENTRY IS NOT ECONOMICALLY FEASIBLE IN MONTANA AND WASHINGTON, AND ENTRY LIKELY WILL NOT BE FEASIBLE IN UTAH IN THE FUTURE.

- 27. Given Qwest's overstated UNE rates, it should be no surprise that profitable statewide UNE-based residential entry is not possible in Montana and Washington. Moreover, although Qwest's last minute rate reductions in Utah increased the gross margin associated with UNE-based entry in some portion of the state, this situation may soon change. Based on the UNE rates that Qwest is advocating in the ongoing Utah UNE rate proceeding, entry will clearly not be economically feasible in Utah if those rates are adopted.¹²
- 28. The business case viability of a UNE-based offering that is, whether it makes sense for AT&T (or any other entrant) to commit its shareholders' capital to that enterprise is

¹² Qwest UNE rates in place were admittedly too high. In order to gain 271 approval, Qwest lowered its UNE rates in Utah but, at the same time, Qwest is participating in a state UNE

no different, analytically, from any other investment decision. The potential entrant's scarce capital must be devoted to its highest-value uses. Thus, a carrier considering whether to enter the local services business in a state (or to continue to participate in that business) must determine whether revenues attributable to the service will exceed the costs of providing the service by an amount sufficient to generate a return that is commensurate with the expectations of investors concerning risks and returns *and* with competing uses for the capital.

- 29. There are three general steps in this analytical approach: (1) identifying and estimating each of the costs of providing the service, (2) identifying and estimating each of the revenue opportunities that will be generated by providing the service, and (3) deriving from these estimated "cash flows" some standard financial measure that allows the investment opportunity to be assessed (and compared to alternative investment opportunities).
- 30. The Commission recently offered guidance on the type of data that should be included when making these calculations. The Commission explained that, in addition to the revenues that are directly available due to local entry, several other revenue sources would be relevant to a price squeeze analysis, including intraLATA toll and interLATA toll revenue contributions, and the amount of federal and state universal service revenues that would be available to new entrants. See, e.g., Vermont 271 Order ¶ 71. The Commission also stated that a margin analysis should consider whether entry is viable using a mix of a UNE-based and resale-based local entry strategy. See id. ¶ 69.
- 31. As described below, our analysis accounts for all of these factors. In particular, our analysis of the level of revenues that are available to potential new entrants reflects intraLATA toll and interLATA toll revenue contributions, as well as the amount of federal and

pricing proceeding where it is advocating Utah UNE rates that would return rates to (or very near

state universal service revenues that would be available to new entrants. Our analysis also accounts for the possibility that a new entrant may enter a state using a combination of UNE-based and resale services (our analysis assumes a UNE-based approach where that is the most profitable entry mode, and a resale-based approach where that is the most profitable mode of entry).

- 32. Furthermore, our analysis is based on the internal costs of an efficient entrant. In the past, the Commission has expressed concern as to whether the well-known internal cost estimates in our analysis are those of efficient carriers. The answer to that question is yes. As explained in the declaration of Stephen Bickley, the internal cost figures on which our analysis is partly based do not reflect carriers' *current* internal costs, but are forward-looking costs that account for future savings associated with efficiencies and increased scale. *See* Bickley Decl. ¶ 2-25.
- 33. Because telecommunications carriers are subject to numerous reporting requirements, and because reliable subscription market research products are available, obtaining the inputs necessary to conduct our analysis was relatively straightforward. Carrier-specific data, including retail local service prices, UNE prices, and access prices are largely publicly reported and directly verifiable. We are confident, therefore, that the following analysis paints an accurate picture of the substantial barrier that Qwest's UNE prices in these states pose to entry of carriers who could provide residential competition.
- 34. The remainder of this section is organized as follows. First, we describe the costs associated with a residential UNE-Platform offering in each of the four states. Second, we describe the revenues that are available to carriers serving customers in these states. Third, we

to) their original levels.

translate these cash flows into margins by looking at the differences between the revenues that would be generated and costs that would be incurred by a new entrant carrier in each state – a type of financial measure commonly used by businesses to make investment decisions.

- 35. This margin analysis shows that profitable residential UNE-Platform-based competition cannot be undertaken by competitive carriers in Montana and Washington. And as noted above, our analysis shows that although competitive entry may now be economically feasible in some parts of Utah given Qwest's last minute rate reductions for the purpose of gaining section 271 approval, that window of opportunity will close if the rates proposed by Qwest in the ongoing state UNE rate proceeding are adopted by the Utah state commission. Exhibit C to our declaration, entitled "UNE Connectivity Margin" summarizes the results of our cost, revenue, and margin analyses for each state. We refer to, and generally follow, the first page of each state-specific margin analysis included within Exhibit C in the discussion below. We also refer to back-up pages for each state, which provide additional support on the assumptions and calculations underlying Exhibit C-1.
- 36. Costs. There are three basic categories of cost associated with UNE-Platform-based services: (1) "connectivity" costs (*i.e.*, the costs associated with purchasing the necessary network elements from the incumbent), (2) non-recurring costs, (*i.e.*, one-time costs associated with purchasing the network elements) and (3) a carrier's own internal costs of running a local telephone service business (*e.g.*, developing, maintaining and operating computer support systems, as well as marketing, customer care, and administration). Our analysis focuses primarily on the first two categories of costs.

37. Table 3 (below) displays the monthly per line rates for non-usage sensitive switching and loop elements (UNE loops and UNE switch ports). The sources for these costs are shown in Exhibit C-1.

Table IV

Loop & Port Cost

		Statewide					
	State	Average	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Loop							
	MT	\$23.72	\$23.10	\$23.90	\$27.13	\$29.29	NA
	UT	\$13.30	\$11.41	\$13.83	\$19.11	NA	NA
	WA	\$14.72	\$5.86	\$10.80	\$12.21	\$13.76	\$18.51
<u>Port</u>							
	ΜT	\$1.58	\$1.58	\$1.58	\$1.58	\$1.58	NA
	UT	\$1.58	\$1.55	\$1.56	\$1.68	NA	NA
	WA	\$1.34	\$1.34	\$1.34	\$1.34	\$1.34	\$1.34

Note: Qwest's Montana deaveraging methodology prevents CLECs from mapping wire centers to UNE zones.

Accordingly, the statewide averages are based on total line distribution data from 1999.

38. Most other network elements required for local service are charged on a usage basis. Therefore, it is necessary to combine published per-minute rates with usage volumes to estimate the cost of the other network elements. As noted earlier, Colorado-specific local usage volumes are available from Qwest's annual dial equipment minute submissions to NECA (the same data that is used in the Commission's Synthesis Cost Model). As local dial equipment data was not yet reported for 2001, the 2000 split of intrastate between toll and local was used. This calculation of "usage minutes" retains the non-conversation time that is reflected in dial equipment minutes and which is included in the cost of UNEs. We have assumed that there will be netting of charges for traffic terminating to a new entrant's UNE-P customer and thus originating local traffic and its associated termination is relevant for local usage on these lines. For the toll-related minutes-of-use categories, we are using the TNS Telecoms (formerly PNR) residential volumes per line from the Bill Harvesting market research. These toll volumes and the calculations for local, usage are detailed in Exhibit C to this declaration.

- 39. For each category of usage (e.g., local, intraLATA toll, etc.), particular network architecture assumptions must be applied. Local usage must be apportioned to reflect the fact that some local calls are "intra-switch" calls (where the calling and called parties are served by the same switch) and some are "inter-switch" calls. Inter-switch calls require assumptions regarding the portion of these calls that are routed directly between the two switches and those that are routed via a tandem. We have assumed that approximately 2% of local inter-switch minutes and 20% of intraLATA toll and interLATA minutes are tandem-routed. Approximately 35% of local calls in Qwest's network are assumed to be intra-switch calls. ¹³ See Exhibit C-7 (for MT, UT and WA).
- 40. The calculated intra-switch, inter-switch, and tandem conversation minutes (or, in the case of toll calls, the toll direct and toll tandem conversation minutes) are then multiplied by the corresponding Qwest usage charges in each state to arrive at expected monthly usage costs per line, as detailed in Exhibit C-7 (for MT, UT and WA). The total monthly usage charges per line, which are also listed in C-1 (for MT, UT and WA), are summarized in the following table.¹⁴

¹³ Although the Commission's Synthesis Model recognizes that about 50 percent of local calls would be intraswitch calls in an efficiently designed network with properly sized switches, the relevant figure for a new entrant contemplating entry is what it will actually pay Qwest. Because Qwest's existing network is not efficiently designed and sometimes uses two switches where one would be more efficient, the 35 percent figure must be used to determine expected connectivity costs that will be billed by Qwest to the competing carrier.

¹⁴ UNE purchasers must pay switching, transport and related usage charges for access-related usage whether a call is originated or terminated by their customer, and we have used the assumption that the customer receives as much access traffic as he or she originates. For intraLATA toll traffic, every originating minute is associated with a terminating minute to another customer (for simplicity assumed to be served by the same ILEC) in the ILEC's service area.

Table V

Usage Cost

	Statewide					
State	Average	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
MT	\$6.67	\$6.67	\$6.67	\$6.67	\$6.67	NA
UT	\$3.76	\$3.54	\$4.00	\$4.29	NA	NA
WA	\$3.37	\$3.37	\$3.37	\$3.37	\$3.37	\$3.37

41. We have included the development of the daily usage feed ("DUF") charge on Exhibit C-9 (for MT, UT and WA), which are summarized in the following table.

Table VI

Daily Usage Feed

	Statewide					
State	Average	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
MT	\$0.31	\$0.31	\$0.31	\$0.31	\$0.31	NA
UT	\$0.14	\$0.14	\$0.14	\$0.14	NA	NA
WA	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35

42. In total, the average recurring monthly connectivity costs (loop plus usage plus DUF) incurred by Qwest to serve a customer in each state are summarized in the following table, which is the monthly connectivity costs for the various zones weighted by the relative number of estimated *residence* (Montana uses total lines) lines in each zone served by Qwest. *See* Exhibit C-1 (for MT, UT and WA).

Table VII

Platform Recurring Cost

	Statewide					
State	Average	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
MT	\$32.29	\$31.66	\$32.46	\$35.69	\$37.85	NA
UT	\$18.78	\$16.65	\$19.53	\$25.22	NA	NA
WA	\$19.78	\$10.91	\$15.85	\$17.26	\$18.81	\$23.56

Note: Qwest's Montana deaveraging methodology prevents CLECs from mapping wire centers to UNE zones. Accordingly, the statewide averages are based on total line distribution data from 1999.

43. In addition to the recurring monthly connectivity costs, new entrants must also pay Qwest for one-time, non-recurring costs associated with acquiring that customer (such as set-

up costs). For the purpose of this analysis, we have assumed that those up-front costs will be recovered over a period of 30 months to reflect a 2½ year customer life. Those costs are summarized in Table 7 below. *See also* Exhibit C-1 (for MT, UT and WA).

Table VIII

Non Recurring Cost

	Statewide					
State	Average	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
MT	\$0.74	\$0.74	\$0.74	\$0.74	\$0.74	NA
UT	\$0.10	\$0.10	\$0.10	\$0.10	NA	NA
WA	\$0.37	\$0.37	\$0.37	\$0.37	\$0.37	\$0.37

- 44. **Revenues.** The Qwest local service rates that UNE-Platform-based providers can obtain for their services are effectively capped by the retail rates charged by Qwest. If new entrants attempt to charge higher rates than Qwest, these new entrants would be unable to attract customers. Owest local service rates are readily available and verifiable from many sources, including Center for Communications Management Information.
- 45. There are, of course, other revenue opportunities available to new entrants. A local service provider can expect to sell vertical features to many customers. we used data taken from the TNS Telecoms Bill Harvest market research product updated through the first quarter of 2002, to determine the average vertical feature revenue per month a new entrant can expect to

¹⁵ In fact, this assumption probably overstates margins because if competitive entry of any sizeable scale were to occur, Qwest would probably decrease its retail rates in an effort to respond to such competition. While such reductions are the essence of competition – and obviously advantageous to consumers in the short run – they also increase the risk faced by the new entrant. It is for this reason that it is critical that UNE rates be based on properly calculated TELRIC, *i.e.*, the forward-looking costs of an efficiently configured and operated competitor. This will ensure that consumers receive the full benefit of competitive pricing over the long run by maximizing the likelihood that competitors are not squeezed out of the market.

¹⁶ The Center for Communications Management Information ("CMMI") is a nationally recognized provider of telecommunications rate and tariff information. *See* www.cmmi.com.

receive in each state. Our analysis also accounts for federal Subscriber Line Charge monthly revenue updated for the July 2002 increase.

- 46. In addition, a UNE-Platform-based provider earns access revenues for originating and terminating long-distance calls. This revenue may either be explicit (when a CLEC charges an independent IXC), or implicit (if the CLEC acts as its own IXC). To estimate these access revenues it is necessary to multiply expected toll minutes (derived from the TNS Telecoms Bill Harvest toll minutes-of-use data) by the relevant access charges that AT&T can replace with UNEs.¹⁷ Our calculations of amounts for estimated monthly per line access charge revenues are set forth in Exhibit C-4 (for MT, UT, WA, and WY).
- 47. We also sought to include the amount of portable federal and state universal service fund revenues that would be available to carriers in each state and to reflect the funding available from the CALLS program.
- 48. In addition, we have computed the intraLATA and InterLATA toll contributions that may be available to new entrants. This information is proprietary, and is summarized in confidential Exhibit D.
- 49. The following table summarizes our calculations of the total revenues by state that AT&T (or another entrant) could expect to receive from residential UNE-based service (this table excludes intraLATA and interLATA toll revenue contributions because those values are proprietary).

¹⁷ Dedicated transport access charges are not included because AT&T does not avoid these access charges through its acquisition of a UNE-P local customer.

Table IX

Total Revenues

State		atewide verage
MT		34.35
UT	\$	28.92
WA	\$	25.93

Note: Qwest's Montana deaveraging methodology prevents CLECs from mapping wire centers to UNE zones. Accordingly, the statewide averages are based on total line distribution data from 1999.

- 50. **Margin.** There are many standard financial measures for assessing the profitability of investing (or continuing) in a line of business. The margin per line can be computed by comparing a carrier's expected costs with its expected revenues for each line. A "gross" UNE-P margin can be determined by subtracting expected direct connectivity expenses (e.g., cost of goods sold) from expected revenues. A "net" (or operating) UNE-P margin can only be determined by subtracting all expected operating expenses (e.g., marketing, customer service, billing, order processing, and other operating activities) from expected revenues.
- Also, as noted above, this analysis accounts for the possibility that a new entrant may enter a state using a combination of UNE-based and resale services by assuming, on a zone-by-zone basis, that a CLEC will adopt a UNE-based approach where that is the most profitable entry mode, and a resale-based approach where that is the most profitable mode of entry.
- 52. These margin analyses for two of the Qwest states (MT and WA) highlighted in this declaration show that residential *gross* margins (for this profit-maximizing amalgam of UNE-based/Resale-based local entry) are very low. *See* Exhibit C-1 (for MT and WA). The following table summarizes these results, on a statewide average basis, for each of these two states (MT and WA) and also includes the results for Utah -- illustrating that Qwest's currently proposed higher rates in the state UNE proceeding will preclude competitive entry. The table

below does not reflect the proprietary interLATA and IntraLATA toll contributions. Those values are shown in Exhibit D.

Table X

Residential Gross Margin

State	 atewide verage
MT	\$ 4.26
UT	\$ 10.06
WA	\$ 6.09

Note: Qwest's Montana deaveraging methodology prevents CLECs from mapping wire centers to UNE zones. Accordingly, the statewide averages are based on total line distribution data from 1999.

- To compute a potential entrant's *net margins*, it is necessary to account for the potential entrant's internal costs of entry. As explained in the declaration of Stephen Bickley, an efficient entrant entrant's internal costs -e.g., customer care, uncollectibles, and general and administrative costs, exceed \$10.00 per line per month in each of these states. *See* Bickley Decl. \P 2-25.
- 54. As shown in the above table, on a statewide basis, three of the states do not generate margins sufficient to recover a new entrant's internal costs of \$10.00 or more of providing local services. And adding interLATA and IntraLATA toll contributions to this analysis does not change those results. *See* Exhibit D. Thus, there is no question that Qwest's UNE rates in Montana and Washington create a price squeeze that precludes competitive entry.
- 55. The situation in Utah, as it relates to UNE rates, demands some explanation in order to fully illuminate what Qwest is doing in Utah and hence, may also do in other states. Qwest, at the 11th hour, reduced UNE rates in Utah to temporarily increase the margins (and improve the benchmark results). Qwest's original Utah rates produced state-wide average margins of \$6.50. The state-wide average margin available to CLEC's in Utah after Qwest's last

minute rate reductions is \$10.06. The UNE rates (post-271) that Qwest is advocating in the ongoing Utah UNE rate proceeding would again reduce state-wide average margins to \$6.31. See the table below. Thus, Qwest's Utah UNE rates should be assessed taking into account that Qwest's recent rate reductions appear to be temporary, and will return to a level at or near their original levels after Qwest has gained Section 271 approval.

Table XI

Utah (Before & After) Margin

	_	<u>Jtah</u> ore 271)	<u>Utah</u> urrent)	_	<u>Jtah</u> er 271)
Statewide Margin	\$	6.50	\$ 10.06	\$	6.31

Note: 'After 271' is based on Qwest's Proposed UNE rates in the current Utah UNE rate proceeding

V. QWEST MONTANA AND WYOMING DEAVERAGING METHODOLOGIES CREATE A SUBSTANTIAL BARRIER TO COMPETITIVE ENTRY.

56. Local entry in Montana and Wyoming is foreclosed by Qwest's unusual deaveraging methodology. Both the Montana and Wyoming state commissions implemented a deaveraging methodology (adopting Qwest's proposal) that makes it virtually impossible for potential entrants to determine which customers are located in which UNE rate zones. ¹⁸ Consequently, potential new entrants must request that information from Qwest on a customer-by-customer basis. ¹⁹ This unusual deaveraging approach inhibits local entry in two ways. First,

¹⁸ Unlike the rest of the Qwest's states, the Montana and Wyoming state commissions did not assign wire centers to distinct UNE zones, but instead relied upon current retail zones that split wire centers into multiple areas. Each wire center contains a base rate area surrounding the switch and multiple zone increments based on a customers distance from the switch. As a result no precise mechanism exists for CLECs to independently determine the zones in which each customer falls. The only precise method currently available to CLECs (documented on Qwest's website http://www.qwest.com/wholesale/clecs/geodeavg.html) is to enter each customer it plans on targeting into Qwest's IMA database.

¹⁹ See id.

it makes it difficult for potential entrants to develop and implement an entry strategy. Because the revenues available to new entrants varies widely from UNE zone to UNE zone, the inability to determine which potential customers are located in which UNE zone (except on a case-by-case basis) makes it difficult, if not impossible, to develop and implement and effective entry strategy. Second, because Qwest will know exactly where CLECs intend to enter – indeed, CLECs must request customer UNE zone information directly from Qwest – Qwest has a competitive advantage that will allow it to thwart competitive entry.

VI. THE MARGIN ANALYSES SUBMITTED BY QWEST ARE UNDOCUMENTED AND INACCURATE.

- 57. Qwest conducted its own "margin analyses" and contends that its rates provide "ample opportunity for CLECs using the UNE-P or other UNE-based configurations to compete successfully". Thompson WY Declaration at 20.²⁰ However, Qwest's margin analyses are fundamentally flawed.
- Qwest's analysis does not account for the costs associated with OSS, DUF or NRCs even though its SGATs indicate that such charges would be applicable. Qwest's analyses also fail to account for internal costs of entry, and focuses only on *gross* margins. In so doing, Qwest's analysis ignores that new entrants will incur additional costs, internally, to provide the marketing, customer service, order processing and billing functions. Moreover, many of the costs (and revenues) used in Qwest's analyses are entirely undocumented.
- 59. Another deficiency in Qwest's margin analysis is that it relies on the Commission's standard (business plus residential) minutes-of-use estimates, rather than on

²⁰ See also Thompson MT Declaration at 27; Thompson WA Declaration at 51; Thompson UT Declaration at 49.

residential state-specific minutes-of-use. The purpose of a residential UNE-P margin analysis is to determine whether entry is economically feasible in a particular state. To make that determination, it is necessary to account for the actual conditions in that state, including the actual number of minutes in that state. A proper margin analysis therefore must, to the extent possible, reflect state-specific minutes for the customer class being studied.

- Qwest's revenue calculation is flawed due to the use of the Commission's standard minutes, which reflect both residential and business minutes-of-use. Where, as here, the residential-only state-specific minutes-of-use are publicly available, it makes no sense to compute a potential entrant's costs and revenues based on minutes-of-use estimates that reflect business minutes. By reflecting business minutes in its analyses, Qwest overstates the access revenues that are available to new entrants because, on average, business long distance minutes generally greatly exceed residential long distance minutes. While Qwest reflects the access revenue for usage associated with a UNE-P customer, it fails to capture the access expense associated with this intraLATA toll revenue.
- 61. Thus, Qwest's margin analysis is fundamentally flawed and cannot be relied upon.

VII. CONCLUSION

62. Contrary to Qwest's claims, Qwest's UNE rates for Montana, Utah, Washington, and Wyoming do not satisfy the Commission's benchmarking analysis, using Colorado as the benchmark state. In Utah, local entry is possible, for the moment, but that will change if Qwest's proposed new UNE rates are accepted. Furthermore, the UNE rates in Montana and Washington are so inflated above TELRIC principles that local entry is not economically feasible.

AT&T Comments, Lieberman Decl. – August 1, 2002 Qwest 271 Application

VERIFICATION PAGE

	I	declare	under	penalty	of	perjury	that	the	foregoing	Declaration	is	true	and
correct.													

/s/ Michael R. Lieberman

Michael R. Lieberman

Executed on: August 1, 2002

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Brian F. Pitkin

Brian F. Pitkin

Executed on: August 1, 2002

UNE Rates Orig. EO Switching EO Switch Port	_	O - RD 0016100	\$	MT 0.0040630		MT - QVR 0.0029230	UT \$0	0.0024619		- QVR 0.0016975	W.A \$ 0	-		- QVR .0012000	WY \$0	,).0037530	WY	1-May-02 - SGAT 0018540
Shared Transport (Blended) Shared Transport (Local) Shared Transport (Toll)	\$ 0.6	0011100	\$	0.0021180	\$	0.0011100			\$ 0	0.009900	\$ \$	0.00066 0.00217	\$0	.0012190			\$0	0011100
Common Xport	\$ 0.6	0004290	\$	0.0009980		0.0009980		0.0004240		0.0004240		.0003600	•	.0003600	\$ 0	0.0004141	\$0	0009710
Tandem switching (usage+port) Term. EO Switching Term. EO Switch Port		0006900 0016100	•	0.0024790 0.0040630	•	0.0006900 0.0029230		0.0010533 0.0024619		0.001053 0.0016975		0.0014100 0.0012000		.0014100 .0012000		0.0016420 0.0037530		.0006900 .0018540
UNE Cost																		
Orig. EO Switching	\$	1.44		3.88	\$	2.79	\$	2.27	\$	1.57	\$	1.25	\$	1.25	\$	2.96	\$	1.46
Orig. EO Switch Port	\$ \$	- 0.70	\$	- 4.40	\$	- 0.75	\$	-	\$	- 0.04	\$	-	\$	-	\$	-	\$	-
Shared Transport (Blended) Common Xport - Blended	Ф	0.70	\$	1.43	\$	0.75	\$	0.28	\$	0.64	\$	0.55	\$	0.88	\$	0.25	\$	0.65
Tandem switching (usage+port)							\$	0.26							\$	0.23		
Term. EO Switching	\$	1.44	\$	3.88	\$	2.79	\$	2.27	\$	1.57	\$	1.25	\$	1.25	\$	2.96	\$	1.46
Term. EO Switch Port	\$	-	\$	-	\$	-			\$	-			\$	-			\$	-
Port	\$	1.53	\$	1.58	\$	1.58	\$	0.92	\$	1.58	\$	1.34	\$	1.34	\$	1.53	\$	2.64
Features	·		\$	0.41	\$	-	\$	1.48	\$	-	\$	-	\$	-	\$	1.91	\$	-
Total Switch Related	\$	4.41	\$	9.75	\$	7.16	\$	6.94	\$	4.71	\$	3.84	\$	3.84	\$	9.36	\$	5.57
Non-Switch Non-Loop	\$	0.70	\$	1.43	\$	0.75	\$	0.34	\$	0.64	\$	0.55	\$	0.88	\$	0.38	\$	0.65
Total Non-Loop	\$	5.11	\$	11.17	\$	7.91	\$	7.28	\$	5.35	\$	4.39	\$	4.72	\$	9.75	\$	6.22
2001 DEM Per Avg Line	7	СО		MT		MT		UT	Т	ÜT	_	WA		WÄ	T	WY		WY
Local		895		954		954		924		924		1,042		1,042		789		789
Toll		225		264		264		223		223_		231		231		358		358
MOU Assumptions	Intra	office %	1	Tandem %														
Local		35%		2.0%														
Toll		0%		20.0%														
2001 DEM Per Avg Line		СО		MT				UT				WA				WY		WY
Local	•	1,791		1,908				1,847				2,084				1,579		1,579
Total	2	2,240		2,436				2,293				2,546				2,294		2,294
2000 DEM Per Avg Line		со		MT				UT				WA				WY		
Local		1,773		1,840				1,762				2,027				1,558		
Total	2	2,236		2,442				2,233				2,502				2,343		

	2000 Local
MT	1,840
UT	1,762
WA	2,027
WY	1,558

Cost Adjusted Non-Loop Rates

	UNE Non-	% Diff in	FCC	% Diff in SynMod	% Diff in Cost Adjusted
State	Loop Rate, per line per month		Non-Loop	UNE Non- Loop Cost: Other	
	inonti	vs CO	line.	states vs CO	Other states vs CO
JT - QVR NA - QVR	\$ 5.35 \$ 4.72	5% -8%	\$ 3.75 \$ 3.48	-8% -15%	14% 8%

Cost Adjusted Switching Rates

State	UNE Switching Rate, per line per month	% Diff in UNE Switching Rate: Other states vs GA	FCC SynMod Switching cost per line,	% Diff in SynMod UNE Switching Cost: Other states vs CO	% Diff in Cost Adjusted UNE Switching Rate: Other states vs CO
MT - QVR	\$ 7.16	62%	\$ 3.85	7%	52%
UT - QVR	\$ 4.71	7%	\$ 3.31	-8%	16%
WY - SGAT	\$ 5.57	26%	\$ 3.44	-4%	32%

Synthesis Model UNE Cost Detail

NECA ID	state	UNE Loop	Sw	EO itching	Signaling	 vitch & naling	_	ommon ansport	_	andem witch	Pla	UNE atform n Loop
485104 Mo	ontana	\$21.12	\$	3.46	\$ 0.39	\$ 3.85	\$	2.30	\$	0.20	\$	6.35
505107 Uta	ah	\$12.07	\$	3.27	\$ 0.07	\$ 3.35	\$	0.57	\$	0.08	\$	4.00
505107 Uta	ah - SOX	\$11.65	\$	3.24	\$ 0.06	\$ 3.31	\$	0.36	\$	0.09	\$	3.75
525161 Wa	ashington	\$ 12.53	\$	3.08	\$ 0.08	\$ 3.16	\$	0.26	\$	0.06	\$	3.48
515108 Wy	oming/	\$23.97	\$	3.16	\$ 0.29	\$ 3.44	\$	1.68	\$	0.15	\$	5.28

Zones and Percents

	Montana			Montana	- QVR		Utah			Utah - Q	VR		Washingto	П		Washing	ton - QVR		Wyoming			Wyoming -	SGAT		٦
Zone	Loop Rate	Res %	Total %	Loop Rate	Res %	Total %	Loop Rate	Res %	Total %	Loop Rate	Res %	Total %	Loop Rat	e Res %	Total %	Loop Rate	Res %	Total %	Loop Rate	Res %	Total %	Loop Rate	Res %	Total %	1
1	\$ 27.63	7	78.3%	\$23.10	?	78.3%	\$ 14.41	65.1%	67.0%	\$11.41	65.1%	67.0%	\$ 7.3	6 1.1%	6.4%	\$ 5.86	1.1%	6.4%	\$ 19.05	?	74.4%	\$ 19.91	?	74.49	%
2	\$ 28.59	?	10.0%	\$23.90	?	10.0%	\$ 17.47	15.1%	14.7%	\$13.83	15.1%	14.7%	\$ 13.5	8 17.9%	18.5%	\$10.80	17.9%	18.5%	\$ 31.83	7	13.1%	\$ 26.94	?	13.19	%
3	\$ 32.45	?	8.5%	\$27.13	?	8.5%	\$ 24.14	19.8%	18.3%	\$19.11	19.8%	18.3%	\$ 15.3	5 19.5%	19.3%	\$12.21	19.5%	19.3%	\$ 40.11	?	4.8%	\$ 30.13	?	4.89	%
4	\$ 35.03	?	3.2%	\$29.29	?	3.2%							\$ 17.3	0 21.9%	20.7%	\$13.76	21.9%	20.7%	\$ 58.43	?	7.7%	\$ 40.98	?	7.79	%
5				Į.						Į.			\$ 23.2	7 39.6%	33.9%	\$18.51	39.6%	33.9%							ı
Actual Average		\$ -	\$28.37		\$ -	\$23.72		\$16.80	\$16.64		\$13.30	\$13.18		\$18.51	\$17.41		\$14.72	\$13.85		\$ -	\$24.79		\$ -	\$ 22.95	į 📗
Ordered Average			\$28.37						\$16.45						\$17.61						\$25.65			\$ 23.38	, -

OSS and Grooming

		ntana - ulation	Uta	h		- QVR	W	ashington		Wyoming
Development and Enhancements, per Order Recurring or Nonrecurring		14.44 IRC			Develo N	ider opment RC ider	\$	3.27 NRC	De	Under evelopment. NRC
Ongoing Maintenance, per Order Recurring or Nonrecurring Transaction Fee, per Order Recurring or Nonrecurring	\$ N	1.41 IRC			Develo	opment C	\$	3.76 NRC	Unde	r Development RC
Recurring of Nonrecurring	stipul lists t	as a	No rates ordered.		No rate	_		dered by mmission		
Notes on OSS	charg	_								
Grooming % of UNE-L to which it applies	\$	-	\$	-	\$ Order	2.00 12.8% red by		0.55 100.0%	\$	2.13 100.0%
Notes						nission				
Cross Connect	\$	1.36	\$	1.24	\$	0.36	\$	0.98	\$	0.47

Cost Adjusted Non-Loop Rates

State	UNE Non- Loop Rate, per line per month	UNE Non-		1	% Diff in Cost Adjusted UNE Non- Loop Rate: Other states vs	Notes
UT - QVR	\$ 5.67	4%	\$ 3.75	-8%	13%	0% Intraoffice
WA - QVR	\$ 5.17	-5%	\$ 3.48	-15%	11%	0% Intraoffice
UT - QVR	\$ 4.76	7%	\$ 3.75	-8%	16%	100% Intraoffice
WA - QVR	\$ 3.90	-13%	\$ 3.48	-15%	2%	100% Intraoffice

Connectivity Margin for Qwest Washington SGAT Rates

Statewide					
Average	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
	1%	18%	20%	22%	40%
\$14.72	\$5.86	\$10.80	\$12.21	\$13.76	\$18.51
\$1.34	\$1.34	\$1.34	\$1.34	\$1.34	\$1.34
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$3.37	\$3.37	\$3.37	\$3.37	\$3.37	\$3.37
\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$19.78	\$10.91	\$15.85	\$17.26	\$18.81	\$23.56
\$0.37	\$0.37	\$0.37	\$0.37	\$0.37	\$0.37
\$20.15	\$11.28	\$16.22	\$17.63	\$19.18	\$23.93
NA					
50					
50					
50					
50					
50					
50					
30	Source: TNS 1	Telecoms Bi	ill Harvesting	g Study, 2Q0	1 - 1Q02
91			•	•	
	AT&T Proprieta	arv			
	•	•			
23	• • • • • • • • • • • • • • • • • • • •	•			
93					
	\$14.72 \$1.34 \$0.00 \$3.37 \$0.35 \$0.00 \$19.78 \$0.37 \$20.15 WA 50 50 50 50 50 60 60 60 60 60 60 60 60 60 60 60 60 60	Average Zone 1 1% \$14.72 \$5.86 \$1.34 \$1.34 \$0.00 \$0.00 \$3.37 \$3.37 \$0.35 \$0.35 \$0.00 \$0.00 \$19.78 \$10.91 \$0.37 \$0.37 \$20.15 \$11.28 NA Source: TNS 1 AT&T Propriet AT&T Propriet	Average Zone 1 Zone 2 1% 18% \$14.72 \$5.86 \$10.80 \$1.34 \$1.34 \$1.34 \$0.00 \$0.00 \$0.00 \$3.37 \$3.37 \$3.37 \$0.35 \$0.35 \$0.35 \$0.00 \$0.00 \$0.00 \$19.78 \$10.91 \$15.85 \$0.37 \$0.37 \$0.37 \$20.15 \$11.28 \$16.22 NA Source: TNS Telecoms Bit AT&T Proprietary AT&T Proprietary AT&T Proprietary	Average Zone 1 Zone 2 Zone 3 1% 18% 20% \$14.72 \$5.86 \$10.80 \$12.21 \$1.34 \$1.34 \$1.34 \$1.34 \$1.34 \$0.00 \$0.00 \$0.00 \$0.00 \$3.37 \$3.37 \$3.37 \$3.37 \$0.35 \$0.35 \$0.35 \$0.35 \$0.00 \$0.00 \$0.00 \$0.00 \$19.78 \$10.91 \$15.85 \$17.26 \$0.37 \$0.37 \$0.37 \$0.37 \$20.15 \$11.28 \$16.22 \$17.63 NA Source: TNS Telecoms Bill Harvesting AT&T Proprietary AT&T Proprietary	Average Zone 1 Zone 2 Zone 3 Zone 4 1% 18% 20% 22% \$14.72 \$5.86 \$10.80 \$12.21 \$13.76 \$1.34 \$1.34 \$1.34 \$1.34 \$1.34 \$1.34 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$3.37 \$3.37 \$3.37 \$3.37 \$3.37 \$0.35 \$0.35 \$0.35 \$0.35 \$0.35 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$19.78 \$10.91 \$15.85 \$17.26 \$18.81 \$0.37 \$0.37 \$0.37 \$0.37 \$0.37 \$20.15 \$11.28 \$16.22 \$17.63 \$19.18 NA Source: TNS Telecoms Bill Harvesting Study, 2Q0 AT&T Proprietary AT&T Proprietary AT&T Proprietary

MARGINS - RES @ Qwest WA Level %

UNE-P N	largins		
\$ / Line		A۱	/erage
	1 - (1%)	\$	14.65
	2 - (18%)	\$	9.71
Zone	3 - (20%)	\$	8.30
92	4 - (22%)	\$	6.75
	5 - (40%)	\$	2.00
UNE	Average	\$	5.79

% / Line		Average
	1	57%
	2	37%
2	3	32%
Zo	4	26%
O NE	5	8%
5 5	Average	22%

UNE-P and Resale Discount			
\$ / Line		Average	
	1 - (1%)	\$	14.65
	2 - (18%)	\$	9.71
Zone	3 - (20%)	\$	8.30
· 20	4 - (22%)	\$	6.75
O NE	5 - (40%)	\$	2.77
<u> </u>	Average	\$	6.09

Washington Resale Margin

TSR Discount	14.74%
Residence	14.74%
Features	14.74%
Retail Revenue	
Residence	\$ 12.50
Features	\$ 6.30
TSR Margin (no Toll)	\$ 2.77

Residential Toll Conversation MOU Per line Per Month

Average Residential Toll Minutes 2Q01 - 1Q02

Qwest		Washington
Intra-Lata	Intra-State	31.4
	Inter-State	3.2
Inter-Lata	Intra-State	16.2
	Inter-State	49.0

Source: TNS Telecoms ReQuest Market Monitor and Bill Harvesting Study

ARMIS-Based Local DEM Per line Per Month

	Per Month	line CAGR:	Estimated 2002 Per Line Per Month Local DEM
2-Way DEM per Line	2,084	7.7%	2,244
1-Way DEM per Line	1,042		1,122

EXHIBIT C-4 (WA) Redacted – For Public Inspection

Feature Revenue

Local Rate Effective Date

11/7/00

Average Monthly Feature Revenue Per Bill	\$ 6.30
Source: TNS Telecoms Bill Harvesting Study, 2Q01 - 1Q02	

Basic Local and UNE Loop Rates by UNE Zone

UNE Rate		UNE Loop	A	verage	# of Wire	Line
Zone	Res Lines	Price	Lo	cal Rate	Centers	Distribution
1	18,018	\$5.86	\$	12.50	2	1%
2	304,321	\$10.80	\$	12.50	13	18%
3	331,755	\$12.21	\$	12.50	13	20%
4	371,218	\$13.76	\$	12.50	14	22%
5	672,604	\$18.51	\$	12.50	69	40%
Totals/Avg.	1,697,916	\$ 14.72	\$	12.50	111	100%

Washington - Qwest UNE Unit Cost Development]			
				Local				Intralata toll			Intrastat	e InterLATA	Interstate	InterLATA
					inte	switch local	0	n ILEC Network	<		}		l .	
							in	tralata toll	intra	ılata toll	interlata toll	interlata toll	interlata toll	interlata toli
	F	AHD Rates	intras	witch local	direct	tandem	di	rect	tand	lem	direct	tandem	direct	tandem
EO Switching orig (average)	\$	0.001200		1	1	1	-	1		1	1	1	1	1
Local Switch - Common Trunk Port	\$	-	ĺ		2	2		2		2	1	1	1	1
Shared Transport	\$	0.001219			1	1		1		1	ļ	1		1
Reciprocal Comp/eo term	\$	0.001200			1	1		1		1				
			\$	0.0012000	\$ 0.00361	90 \$ 0.003619	0 \$	0.0036190	\$	0.0036190	\$ 0.0012000	\$ 0.0024190	\$0.0012000	#########
MOU			}	392.7	714.7	14.6	- 1	25.1		6.3	0.0	0.0	78.4	19.6
Cost per Line			\$	0.471202	\$ 2.5863	44 \$ 0.05278	3 \$	0.090867	\$	0.022717	\$ -	\$ -	\$ 0.094096	\$ 0.047421

MOU Assumptions	Outbound	Inbound	total	intraoffice	tandem
Local	1122	0	1122	35%	2%
IntraLATA Toll	31	0	31	0%	20%
Intrastate InterLATA				0%	20%
Interstate InterLATA	49	49	98	0%	20%
Total	1202	49	1251		

DUF Record Calculation		Usage R	ecords
į	Conversation		
i	MOU/MSG	Outbound	Inbound
Local	4	280	
IntraLATA Toll	4	8	8
Intrastate InterLATA	4	0	0
interstate InterLATA	5	10	10
		316	

UNE Usage Cost by Service					Average	
Citz osage oost by ocivide	% MOU		LINIC	Cost	-	
	% WOU		OINE	Cost	Cost pe	Lille
Local						
Intraswitch local		35%	\$	0.001200		
Interswitch direct local		64%	\$	0.003619		
Interswitch tandem local		1%		0.003619		
		.,.	\$	0.002772		3.11
IntraLATA Toll						
On ILEC Network						
intralata toll direct		80%	\$	0.003619		
intralata toll tandem		20%	\$	0.003619		
			\$	0.003619		0.11
Intrastate InterLATA						
interlata toll direct		80%	\$	0.001200		
interlata toll tandem		20%	\$	0.002419		
			\$	0.0014438		_
Interstate InterLATA			•			
interlata toll direct		80%	\$	0.001200		
interlata toll tandem		20%	\$	0.002419		i
			\$	0.0014438		0.14
Total Usage Per Line					\$	3.37

Qwest Washington UNE-P: Commission Ordered Rates

	By Density Zone	,	Zone 1	;	Zone 2	2	Zone 3	7	Zone 4	Z	Zone 5	State	ewide		
A. B. C.	Residence Line Distribution Loop Analog Line Side Port		1.1% \$5.86 \$1.34	***	17.9% \$10.80 \$1.34	19.5% \$12.21 \$1.34				\$12.21 \$13.76		39.6% \$18.51 \$1.34		\$14	0% 4.72 .34
D. E. F. G.	Local Switch Usage Local Switch - Common Trunk Port Shared Transport DUF: Per Record Processed	\$	0.00120	\$	0.00120	\$	0.00120	\$	0.00120	\$	0.00120	\$ \$ 0.00	0120 - 01219 01100		

Qwest Washington_Daily Usage File Calculation

Usage Recording Costs Rate		<u>Rate</u>	<u>Application</u>	Factor			Cost/Month	
DUF: Per Record Processed	\$	0.001100	Per Record	316	Records/Bill	\$	0.35	

Connectivity Margin for Qwest Utah SGAT Rates

		Statewide			
COSTS		Average	Zone 1	Zone 2	Zone 3
Zone weights			65%	15%	20%
Loop		\$13.30	\$11.41	\$13.83	\$19.11
Port		\$1.58	\$1.55	\$1.56	\$1.68
Features		\$0.00	\$0.00	\$0.00	\$0.00
Usage		\$3.76	\$3.54	\$4.00	\$4.29
DUF		\$0.14	\$0.14	\$0.14	\$0.14
OSS - RC		\$0.00	\$0.00	\$0.00	\$0.00
Platform - Recurring Cost		\$18.78	\$16.65	\$19.53	\$25.22
NRC		\$0.10	\$0.10	\$0.10	\$0.10
Total Platform (w/NRC)		\$18.89	\$16.75	\$19.64	\$25.33
REVENUES	RES @ Qwest U	T			
Basic Local Svc					
UNE Zone 1	\$ 14.54	•			
UNE Zone 2	\$ 14.22	!			
UNE Zone 3	\$ 11.91				
Basic Local Svc - Statewide	\$ 13.97	•			
Other Revenue Sources					
Features	\$ 7.34		Source: TNS 7	Telecoms Bi	ill Harvesting Study, 2Q01 - 1Q02
Subscriber Line Charge	\$ 6.00	1			
IntraLATA Toll Contribution			AT&T Propriet	ary	
InterLATA Toll Contribution			AT&T Propriet	ary	
Access	\$ 1.44	ļ		-	
Federal IAS (zone 3 only)	\$ 0.83	,	From 3Q02 IA	S sheet HC	C10.
Total Revenue (average)	\$ 28.92	!			
UNE Zone 1		<u>}</u>			
UNE Zone 2	\$ 29.00)			
UNE Zone 3	\$ 27.53	}			

MARGINS - RES @ Qwest UT Level

%

UNE-P N	largins		
\$ / Line		A	verage
Эe	1 - (65%)	\$	12.57
Zone	2 - (15%)	\$	9.36
O.N.E.	3 - (20%)	\$	1.37
NO.	Average	\$	9.87

% / Line		Average
je L	1	43%
loZ	2	32%
O N III	3	5%
j j	Average	34%

UNE-P and Resale Discount							
\$ / Line		A	verage				
e E	1 - (65%)	\$	12.57				
Zone	2 - (15%)	\$	9.36				
UNE	3 - (20%)	\$	2.35				
j 5	Average	\$	10.06				

Utah Resale Margin

TSR Discount		12.2%
Residence		12.20%
Features	•	12.20%
Retail Revenue		
Residence	\$	13.97
Features	\$	7.34
TOD 14		
TSR Margin (no Toll)	\$	2.60

Residential Toll Conversation MOU Per line Per Month

Average Residential Toll Minutes 2Q01 - 1Q02

Qwest		Utah
Intra-Lata	Intra-State	38.0
	Inter-State	1.0
Inter-Lata	Intra-State	-
	Inter-State	55.8

Source: TNS Telecoms ReQuest Market Monitor and Bill Harvesting Study

ARMIS-Based Local DEM Per line Per Month

	Per Month	line CAGR:	Estimated 2002 Per Line Per Month Local DEM
2-Way DEM per Line	1,847	5.9%	1,957
1-Way DEM per Line	924		978

EXHIBIT C-4 (UT) Redacted – For Public Inspection

Feature Revenue

Local Rate Effective Date

11/7/00

Average Monthly Feature Revenue Per Bill	\$ 7.34
Source: TNS Telecoms Bill Harvesting Study, 2Q01 - 1Q02	

Basic Local and UNE Loop Rates by UNE Zone

UNE Rate		IE Rate UNE Loop Average				Line
Zone	Res Lines	Price	Lo	cal Rate	Centers	Distribution
1	458,209	\$11.41	\$	14.54	25	65%
2	106,538	\$13.83	\$	14.22	10	15%
3	139,249	\$19.11	\$	11.91	24	20%
Totals/Avg.	703,996	\$ 13.30	\$	13.97	59	100%

Utah - Qwest UNE Unit Cost Development								}						
				Local interswitch local O		Intralata toll			Intrastate InterLATA			Interstate	InterLATA	
						On I	LEC Network	;		\neg				
						intra	ilata toll	intral	iata toli	interlata to	ıll	interlata toll	interlata toll	interlata toll
	Α	HD Rates	intraswitch local	direct	tandem	dire	ct	tande	em	direct		tandem	direct	tandem
EO Switching orig (average)	\$	0.001705	1	1	1		1		1	1		1	1	1
Local Switch - Common Trunk Port	\$	-		2	2		2		2	1		1	1	1
Shared Transport	\$	0.000990		1	1	1	1		1	!		1	1	1
Reciprocal Comp/eo term	\$	0.001705		1	1		1		1					
			\$ 0.0017046	\$ 0.0043993	\$0.0043993	\$	0.0043993	\$	0.0043993	\$0.00170)46	\$0.0026946	\$ 0.0017046	*********
MOU			342.4	623.2	12.7		30.4		7.6	0.0		0.0	89.2	22.3
Cost per Line			\$ 0.583676	\$ 2.741529	\$ 0.055950	\$	0.133594	\$	0.033399	\$	-	\$ -	\$ 0.152087	\$ 0.060104

MOU Assumptions	Outbound	Inbound	total	intraoffice	tandem
Local	978	0	978	35%	2%
IntraLATA Toll	38	0	38	0%	20%
Intrastate InterLATA				0%	20%
Interstate InterLATA	56	56	112	0%	20%
Total	1072	56	1128		

DUF Record Calculation	Usage Records			
	Conversation			
	MOU/MSG	Outbound	Inbound	
Local	4	245		
IntraLATA Toll	4	9	9	
Intrastate InterLATA	4	0	0	
Interstate InterLATA	5	11	11	
		286		

UNE Usage Cost by Service					Averag	je 💮
•	% MOU		UN	E Cost	Cost p	er Line
Local						
Intraswitch local		35%	\$	0.001705		
Interswitch direct local		64%		0.004399		
Interswitch tandem local		1%		0.004399		
mierswitch tandem local	,	1 70	φ \$	0.004399		3.38
			Ð	0.003430		3.30
IntraLATA Toll						
On ILEC Network						
intralata toll direct		80%	\$	0.004399		
intralata toll tandem	1	20%	\$	0.004399		
			\$	0.004399		0.17
Intrastate InterLATA						
interlata toll direct		80%	\$	0.001705		
interlata toli tandem		20%	\$	0.002695		
THO HALL TO HALLOON		2070	Š	0.0019026		_
Interstate InterLATA			Ψ	0.0013020		_
interlata toil direct	1	80%	\$	0.001705		
interlata toll tandem		20%	\$	0.002695		
, , , , , , , , , , , , , , , , , , ,			\$	0.0019026		0.21
Total Usage Per Line					\$	3.76
Zone 1					\$	3.54
Zone 2		**			\$	4.00

Qwest Utah UNE-P: Commission Ordered Rates

	By Density Zone	Zone 1	Zone 2	Zone 3	Statewide
A.	Residence Line Distribution	65.1%	15.1%	19.8%	100%
В.	Loop	\$11.41	\$13.83	\$19.11	\$13.30
C.	Analog Line Side Port	\$1.55	\$1.56	\$1.68	\$1.58
D.	Local Switch Usage	\$ 0.001585	\$ 0.001837	\$ 0.001997	\$0.001705
E.	Local Switch - Common Trunk Port				\$ -
F.	Shared Transport				\$0.000990
G.	DUF: Per Record Processed				\$0.000506

Qwest Utah_Daily Usage File Calculation

Usage Recording Costs	Rate	Application	Fact	tor		<u>c</u>	Cost/Month
DUF: Per Record Processed	\$ 0.000506	Per Record		286	Records/Bill	\$	0.14

Connectivity Margin for Qwest Montana SGAT Rates

Statewide				
Average	Zone 1	Zone 2	Zone 3	Zone 4
	78%	10%	9%	3%
\$23.72	\$23.10	\$23.90	\$27.13	\$29.29
\$1.58	\$1.58	\$1.58	\$1.58	\$1.58
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$6.67	\$6.67	\$6.67	\$6.67	\$6.67
	.	*		

Usage		\$6.67	\$6.67	\$6.67	\$6.67	\$6.67
DUF		\$0.31	\$0.31	\$0.31	\$0.31	\$0.31
OSS - RC		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Platform - Recurring Cost		\$32.29	\$31.66	\$32.46	\$35.69	\$37.85
NRC		\$0.74	\$0.74	\$0.74	\$0.74	\$0.74
Total Platform (w/NRC)		\$33.02	\$32.40	\$33.20	\$36.43	\$38.59
REVENUES	RES @ Qwest MT					

REVENUES RES @ Qwest MT
Basic Local Svc

COSTS

Loop Port Features

Zone weights - Total Lines (*)

\$ 18.71
\$ 19.46
\$ 22.46
\$ 24.46
\$ 19.29
\$ \$ \$ \$

Other Revenue Sources
Features \$ 4.24
Subscriber Line Charge \$ 6.00
IntraLATA Toll Contribution
InterLATA Toll Contribution

Source: TNS Telecoms Bill Harvesting Study, 2Q01 - 1Q02

AT&T Proprietary AT&T Proprietary

 Access
 \$ 2.15

 Federal USF
 \$ 2.61

 Federal IAS (average)
 \$ 0.06

UNE Zone 1 \$

UNE Zone 2 \$

UNE Zone 3 \$

UNE Zone 3 \$

0.06

34.35 33.77 34.52 37.52 39.52 State wide average -- detail by zone is not available State wide average -- detail by zone is not available

MARGINS - RES @ Qwest MT

Total Revenue (average)

Level

%

UNE-P Margins						
\$ / Line	Av	erage				
	1 - (78%)	\$	1.37			
e e	2 - (10%)	\$	1.32			
Zone	3 - (9%)	\$	1.09			
UNE	3 - (3%)	\$	0.93			
<u> </u>	Average	\$	1.32			

% / Line		Average
	1	4%
9	2	4%
l loZ	3	3%
N N	3	2%
	Average	4%

UNE-P and Res	sale Discount		
\$ / Line		Av	erage
	1 - (78%)	\$	4.15
90	2 - (10%)	\$	4.29
Zone	3 - (9%)	\$	4.83
UNE	3 - (3%)	\$	5.19
á	Average	\$	4.26

^(*) Residential lines by zone are not available.

Montana Resale Margin

TSR Discount	18.10%
Residence	18.10%
Features	18.10%
Retail Revenue	
Residence	\$ 19.29
Features	\$ 4.24
TOP 14	
TSR Margin (no Toll)	\$ 4.26

Residential Toll Conversation MOU Per line Per Month

Average Residential Toll Minutes 4Q00 - 1Q02

Qwest		Montana
Intra-Lata	Intra-State	31.3
	Inter-State	-
Inter-Lata	Intra-State	25.5
	Inter-State	68.6

Source: TNS Telecoms ReQuest Market Monitor and Bill Harvesting Study

ARMIS-Based Local DEM Per line Per Month

	Per Month	line CAGR:	Estimated 2002 Per Line Per Month Local DEM
2-Way DEM per Line	1,908	13.9%	2,173
1-Way DEM per Line	954		1,087

EXHIBIT C-4 (MT) Redacted – For Public Inspection

Feature Revenue

Local Rate Effective Date

11/7/00

Average Monthly Feature Revenue Per Bill	\$ 4.24
Source: TNS Telecoms Bill Harvesting Study, 4Q00 - 1Q02	I

Basic Local and UNE Loop Rates by UNE Zone

UNE Rate	Res Lines	UNE Loop	Average	# of Wire	Line
Zone		Price	Local Rate	Centers	Distribution
BRA	205,070	\$23.10	\$ 18.71	Zones are not	78%
1	26,190	\$23.90	\$ 19.46		10%
2 3	22,262 8,381	\$27.13 \$29.29	\$ 22.46 \$ 24.46	deaveraged by wire center.	9% 3%
Totals/Avg.	261,903	\$ 23.72	\$ 19.29	72	100%

Montana - Qwest UNE Unit Cost Development										1				
			Local				Intralata toll			Intrastat	e InterLATA	Interstate	InterLATA	
					interswitch local		On ILEC Network				1			
								alata toll	intra	alata toll	interlata toll	interlata toll	interlata toll	interlata toll
	P	HD Rates	intras	witch local	direct tandem			ct	tand	dem	direct	tandem	direct	tandem
EO Switching orig (average)	\$	0.002923	1	1	1	1		1		1	1	1	1	1
Local Switch - Common Trunk Port	\$	•			2	2		2		2	1	1	1	1
Shared Transport	\$	0.001110	1		1	1		1		1		1	1	1
Reciprocal Comp/eo term	\$	0.002923	1		1	1		1		1	i			
_			\$	0.0029230	\$ 0.0069560	\$0.0069560	\$	0.0069560	\$	0.0069560	\$0.0029230	\$0.0040330	\$ 0.0029230	#########
MOU			1	380.3	692.2	14.1	1	25.1		6.3	0.0	0.0	109.8	27.5
Cost per Line			\$	1.111681	\$ 4.814844	\$ 0.098262	\$_	0.174316	\$	0.043579	\$ -	- \$	\$ 0.320973	\$ 0.110715

MOU Assumptions	Outbound	Inbound	total	intraoffice	tandem
Local	1087	0	1087	35%	2%
IntraLATA Toll	31	0	31	0%	20%
Intrastate InterLATA				0%	20%
Interstate InterLATA	69	69	137	0%	20%
Total	1187	69	1255		

DUF Record Calculation	Usage Records			
	Conversation			
	MOU/MSG	Outbound	Inbound	
Local	4	272		
IntraLATA Toli	4	8	8	
Intrastate InterLATA	4	0	0	
Interstate InterLATA	5	14	14	
		315		

UNE Usage Cost by Service					Avera	ae
, ,	% MOU		UNI	E Cost		per Line
Local						
Intraswitch local		35%	\$	0.002923		
Interswitch direct local		64%		0.006956		
Interswitch tandem local		1%		0.006956		
			\$	0.005544		6.02
IntraLATA Toll						
On ILEC Network						
intralata toll direct		80%	\$	0.006956		
intralata toll tandem		20%	\$	0.006956		
			\$	0.006956		0.22
Intrastate InterLATA						
interlata toll direct		80%	\$	0.002923		
interlata toll tandem		20%	\$	0.004033		
			\$	0.0031450		_
Interstate InterLATA			٠			
interlata toll direct		80%	\$	0.002923		
interlata toll tandem		20%	\$	0.004033		
			\$	0.0031450		0.43
Total Usage Per Line					\$	6.67

Qwest Montana UNE-P: Commission Ordered Rates

	By Density Zone	Zone 1	Zone 2	Zone 3	Zone 4	Statewide
A.	Residence Line Distribution	78.3%	10.0%	8.5%	3.2%	100%
B.	Loop	\$23.10	\$23.90	\$27.13	\$29.29	\$23.72
C.	Analog Line Side Port	\$1.58	\$1.58	\$1.58	\$1.58	\$1.58
D.	Local Switch Usage	\$ 0.002923	\$ 0.002923	\$ 0.002923	\$ 0.002923	\$ 0.002923
E.	Local Switch - Common Trunk Port					\$ -
F.	Shared Transport					\$0.001110
G.	DUF: Per Record Processed					\$0.000985

Qwest Montana_Daily Usage File Calculation

Usage Recording Costs		Rate	Rate Application		Factor			Cost/Month	
DUF: Per Record Processed	\$	0.000985		Per Record		315	Records/Bill	\$ 0.31	

EXHIBIT D (MT) Redacted – For Public Inspection

EXHIBIT D (WA) Redacted – For Public Inspection

EXHIBIT D (UT) Redacted – For Public Inspection